

An Audit of Political Behavior Research

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Abstract

What are the most important concepts in the political behavior literature? Have experiments supplanted surveys as the dominant method in political behavior research? What role does the American National Election Studies (ANES) play in this literature? We utilize a content analysis of over 1,100 quantitative articles on American mass political behavior published between 1980 and 2009 to address these questions. We then supplement this with a second sample of articles published between 2010 and 2018. Four key takeaways are apparent. First, the agenda of this literature is heavily skewed toward understanding voting to a relative lack of attention to specific policy attitudes and other topics. Second, experiments are ascendant, but are far from displacing surveys, and particularly the ANES. Third, while important changes to this agenda have occurred over time, it remains much the same in 2018 as it was in 1980. Fourth, the centrality of the ANES seems to stem from its time-series component. In the end, we conclude that the ANES is a critical investment for the scientific community and a main driver of political behavior research.

Keywords

political behavior, political science, social sciences, voting, public opinion, surveys, American national election studies, quantitative political science

Introduction

The central purpose of political science research is to generate knowledge about how politics works. This is done through the exploration of more specific questions such as why (some) citizens vote, how citizens formulate preferences regarding candidates and policies, and how environmental stimuli such as elite appeals and social interactions influence opinions. The preceding several decades of research on political behavior has seen innovative work by many scholars that has advanced our understanding of these broad questions, as well as many others (for but a sampling of relevant research, see Chong & Druckman, 2007; Duch & Stevenson, 2008; Hillygus & Jackman, 2003; Huckfeldt & Sprague, 1995; Iyengar & Kinder, 1987; Lau & Redlawsk, 2006; Leighley & Nagler, 2013; Lodge, Steenbergen, & Brau, 1995; Mutz, 2006; Vavreck, 2009; Zaller, 1992).

Such gains, however, are not solely attributable to the creativity and passion of the scholars who produced them. The discipline as whole has also made considerable investments in data infrastructure and collections to support this important work. For example, since 1980, the American National Election Studies (ANES) have used many millions of dollars of federal funding to provide the data used in thousands of empirical analyses, many of which have been published in the discipline's leading journals. Likewise, the discipline's

investment in the ANES has been mirrored by huge investments by private foundations and others in largely cross-sectional survey projects (e.g., Pew's Research Center on United States Politics & Policy, the Annenberg National Election Survey, the Cooperative Congressional Election Study, and the Cooperative Campaign Analysis Project).

As with any portfolio of investments, however, it is important to occasionally conduct an audit and ask if such allocations are justified and are producing the kinds of advances that we seek. Such an audit is important for two reasons. First, it enables the field to ascertain whether the published empirical research record captures the core theoretical concepts that scholars think are critical. Of course, what *should* be the focus of political behavior research is

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debatable. Our goal is to enable scholars to assess the empirical record from their own perspectives.

Second, an audit is important now given the development of new measurement strategies that may challenge the continued value of large-scale resources such as the ANES. Grant-making activities from government, foundations, and universities have increasingly supported various data collection strategies such as laboratory experiments, survey experimentation (e.g., the Time-Sharing Experiments for the Social Sciences program), and, most recently, the mining of social media data (see, for example, <https://wp.nyu.edu/smapp/>). In addition, the development of crowd-sourced data collection tools such as Amazon's Mechanical Turk may provide researchers with a cost-effective method for collecting data (Berinsky, Huber, & Lens, 2012; Mullinix, Leeper, Freese, & Druckman, 2015). These new resources are attractive as they enable some flexibility in data collection, although they clearly lack one of the key calling cards of resources such as the ANES—the ability to investigate mass politics over a long time period. Without occasionally stepping back and reviewing what we are funding and how it is translating into scholarship, we risk making funding decisions based on inaccurate or outdated ideas about how the discipline is or is not changing and what the drivers of our intellectual progress really are.

In this article, we seek to provide an audit for the field of political behavior—with a focus on quantitative investigations of American voting behavior, public opinion, and communication. We first use content analysis data from more than 1,100 articles about American political behavior, published in 11 leading journals from 1980 to 2009 to explore, over time, the concepts most frequently studied and the methods typically employed. We then supplement these data with a sampling of 41 published research articles from the 2010-2018 period.¹

With such data, we can ask a variety of specific questions: given available data collections, what questions and topics have dominated political behavior research since 1980? Has a growing emphasis on experimental methodology (Druckman, Green, Kuklinski, & Lupia, 2006, 2011) led to a diminution of survey methods as the tool kit of choice for political behavior scholars? What role has the ANES, the largest investment by the National Science Foundation in political science, played in driving research on these concepts? Have the core concepts measured in the ANES time-series continued to be relevant to most scholars of American political behavior? Does the data on what is being measured justify a different allocation of resources or a rethinking of the value of the ANES time series?

In the remainder of this article, we first describe the data we collected and then present our analyses and conclusions. To preview, we find that the published research in American political behavior has (since 1980) been heavily skewed toward a small number of important concepts central to understanding voting. Furthermore, over the entire period,

these central concepts have been measured most often using survey methods. Although experimental data use has trended positively and surged in use in the 2010-2018 period, surveys remained the dominant data source for behavior research. Perhaps surprisingly given the plethora of alternative survey data sources in recent years and the availability of inexpensive survey alternatives (e.g., Santoso, Stein, & Stevenson, 2016), we find that researchers continue to use the ANES as a primary source of data. In addition, despite some important exceptions we discuss, there is a notable *stability* in the conceptual agenda and methodological focus of political behavior research over this time frame. Finally, we provide clear evidence that the centrality to the ANES for political behavior research stems *from its time-series component*. The unique ability of researchers to use the ANES to explore variation (or lack thereof) over multiple elections continues to render the ANES invaluable to the field of political behavior.

Data: 1980-2009

In auditing the political behavior literature, we had to first decide on a time frame and set of journals from which to sample. We opted to focus on the years 1980 to 2009 as this not only encapsulates a fairly long period of time but also includes the purported rise (or return) in political behavior research of work centered on political persuasion (e.g., Mutz, Sniderman, & Brody, 1996), and experimental methods (e.g., Iyengar & Kinder, 1987). We then downloaded all (i.e., approximately 10,000) articles from a set of 11 journals that publish much of the central work in the field.² From these, we selected the 1,163 articles that employed some quantitative approach to study some/any question in the field of American mass political behavior.³ This meant we had roughly 39 articles coded per year.⁴ We then had a team of coders closely read and content analyzed these articles.⁵ All data collection and content analyses of these articles took place from late 2011 into 2012. Of course, we recognize that the timing/nature of our sample structures the implications of our analyses for the current trajectory of the field. For this reason, as we later explain, we supplemented these data with a small sample of articles from 2010 to 2018.

Information about the *substantive* content and data sources used was recorded in depth and serves as our central data. Two elements of the contents of each article were available to be coded. First, coders indicated whether each article used any of 48 different “concepts” we believed central to political behavior research; a full listing of the concepts can be found in Table 1. By “concept” we mean a construct that captures an aspect of political behavior broadly defined.⁶ We identified the concepts based on (a) our own broad experiences of working in the field, which when taken together (i.e., sum of author \times years) constitute more than three-quarters of a century of work; (b) reviewing the ANES core and the items included on other major surveys (e.g., the

Table 1. Concepts and Policy Issues.

Concepts					
Differences between the parties	Emotions about President	Approval of congress' general job performance	Campaign contact	Equalitarianism	Attitudes about Blacks
Feelings about the parties	Emotions about presidential candidates	Approval of congressional representative's general job performance	Vote choice	Trust in government	Use and nature of stereotypes
Party Id	Likes and dislikes about presidential candidates	Economic performance	Turnout in national elections	Political efficacy and perceived government responsiveness	Racial Identity
Party performance: economy	President's traits	Personal economic situation	Registration	Television news consumption	Ethnic Identity
Party performance: foreign affairs	Presidential candidate's traits	Position of the country in world affairs	Liberal-conservative values	Internet news consumption	Social class
Feelings about President	Approval of President's general job performance	Interest in politics or campaigns	Religious values and beliefs	Newspaper news consumption	Personality
Feelings about presidential candidates	Approval of President's performance on the economy	Political knowledge	Religious identity	Radio news consumption	Problems facing the country
Feelings about congressional candidates	Approval of President's performance on foreign policy	Campaign activity	Moral traditionalism	Feelings about social groups in general	Attitudes about divided government
Issue attitudes and perceptions (own, parties, candidates)					
Policies concerning the government's responsibility for the provision of jobs and income support	Policies concerning affirmative action	Policies concerning equality for women	Policies concerning the death penalty	Policies concerning environmental protection	Policies concerning internationalism vs. isolationism
Policies concerning government aid to Blacks	Policies concerning defense spending	Policies concerning abortion	Policies concerning gay and lesbian issues	Policies concerning services vs. spending	

Cooperative Congressional Election Study); and (c) reviewing a sample of articles to add further significant concepts to the list. Notably, the concepts listed in Table 1 include, but are not limited to, factors related to partisanship (e.g., party identification (PID) and feelings toward the parties), political participation (e.g., vote choice and various elements of news consumption), values (e.g., liberal-conservative values and moral traditionalism), and attitudes toward/about government (e.g., political efficacy and trust and Presidential/Congressional approval). The concepts are at a very general level and do not refer to particular questions; for example, one concept is "personal economic situation," which could be operationalized in dozens of ways (e.g., the ANES offers over 50 measures on its core utility). When it came to the actual coding, coders rarely, if ever, inquired about a political concept in an article that was not part of the coding scheme.⁷

The second type of item coders recorded concerned whether the article in question incorporated data pertaining to 11 distinct policy domains (Table 1). The coders could indicate whether the article included measures pertaining to individual attitudes, perceptions of party positioning, and/or perceptions of candidate positioning on the issues. In creating this list of issues, we relied more directly on the ANES as, each year, the ANES makes an effort to include long-standing critical issues as well as emerging ones, as reflected in policy making and news coverage. Our reliance on the ANES, however, may mean we miss issues that are salient for brief periods of time as the ANES has a commitment to maintaining some time series continuity: it is somewhat constrained in adding too many new issues for each data collection. Our results regarding issues should be read with this limitation in mind.

Overall, then, each article could be coded for the presence of up to 81 (48 concepts + 33 issue indicators) different content elements. Coders also indicated whether a concept or policy position, when present in the article, was “central to the main themes of the paper.” This enables us to speak not just to the frequency of a wide array of topics in research on American mass political behavior but also to their relative importance in the field.

Some of the concepts and issue dimensions listed in Table 1 could potentially be collapsed into broader superordinate categories. However, in our analyses we will maintain a focus on the individual concepts/issues rather than attempting to do so as it is not immediately clear on how to make nonarbitrary decisions when collapsing the categories. We did explore the potential interrelationship between these concepts and issues via factor analysis; see Figure OA7 and Table OA3 in the Online Appendix for the results. Notable here is that relative lack of clear superordinate structures. Rather, many factors explaining small degrees of variance emerged, suggesting that collapsing across categories would gain us relatively little in additional clarity when analyzing the data.

Coders recorded the data source(s) used in the manuscript in addition to their substantive content. Coders indicated whether the ANES, other survey(s), experiments, or archival sources provided the data for each of the concepts/policy issues coded as present in the article. When necessary coders could indicate that more than one data source had been employed. If the coder indicated that the ANES had been used in the manuscript, they were further queried as to whether one, two, or three or more ANES surveys had been used. These measures enable us to track the methodological progression of political behavior research as well as the frequency of use of the time-series component of the ANES. Put another way, it allows us to audit the worth of the ANES by documenting the extent of its usage and, in particular, whether the time-series aspect of the ANES drives its application.

Analyses

We begin by considering the agenda of the American political behavior literature between 1980 and 2009. Although this does not directly speak to the question of “auditing” the worth of investments in different data collection approaches, it provides indirect evidence on whether central concepts cohere with the missions of those data collections and specifically the ANES. Then, we turn to an explicit investigation of methodological orientation. In so doing, we will also consider potential differences in substantive focus by method.

The Agenda of American Political Behavior Research

One place to begin is a consideration of the “complexity” of political behavior research via a focus on the number of

concepts and policy issues coded as present in the articles. On average, articles contained 4.96 ($SD = 3.74$) coded elements representing the use of approximately 6% of the potential codes. Interestingly, articles on average tended to feature more “concepts” ($M = 3.86$, $SD = 2.55$) than policy issues ($M = 1.10$, $SD = 2.40$). This gap does not arise from the availability of more concept codes than policy codes as it remains even when focusing instead on the average proportion of codable concepts and policies found in the articles.⁸ Moreover, there is some evidence that this gap has increased over time due to a slight increase in concept use and a slight decrease in issue use across the years coded (see Figure OA2 in the Online Appendix).

Figure 1 provides more context concerning the core contents of the American mass behavior literature.⁹ First, the left-hand subgraph in Figure 1 plots the number of times each concept and policy issue code was indicated as present in an article. A small set of factors dominate the scene; while the mean number of appearances per concept/issue is 71.63 ($SD = 101.40$), the median value is only 33. A great many of these factors thus appear rather sparingly in the data set. The right-hand subgraph in Figure 1 drills down into this distribution by focusing on the most used concepts, specifically those that appeared in at least 10% of articles, and, therefore, represents a first approximation of the core of the American political behavior agenda from 1980 to 2009. Two elements of this subgraph stand out. First, the composition of the items speaks to the heavy focus of the behavior literature on voting as these most used concepts either directly speak to this behavior (e.g., vote choice and turnout) or deal with central explanatory factors used in voting studies (e.g., PID, ideology, interest and knowledge, and three issue attitudes at the heart of political debate in the United States). Second, this list is again dominated by “concepts” to the relative deprivation of focus on policy issues. Figure 1 thus suggests an agenda for behavioral research that is focused on voting to the detriment of other aspects of political participation and other opinion formation processes (at least in relation to specific issues).¹⁰ Importantly, this conceptual focus on voting (elections) is suggestive about the centrality of the ANES whose stated mission is “to inform explanations of *election* outcomes by providing data that support rich hypothesis testing, maximize methodological excellence, measure many variables, and promote comparisons across people, contexts, and time” (<http://www.electionstudies.org/>; italics added). We will return explicitly to the role of the ANES in the next section but the conceptual state of the field suggests one that is consistent with the purpose of the ANES.

Figure 1 focuses on the most used concepts in American political behavior research. However, this may give a mistaken impression of the factors dominating this agenda insofar as some concepts may appear very frequently as components ancillary to the main purpose of the article (e.g., as control variables). To get a better sense of which concepts have been most *important*, we asked our coders to indicate whether the concept in question was “central to the main

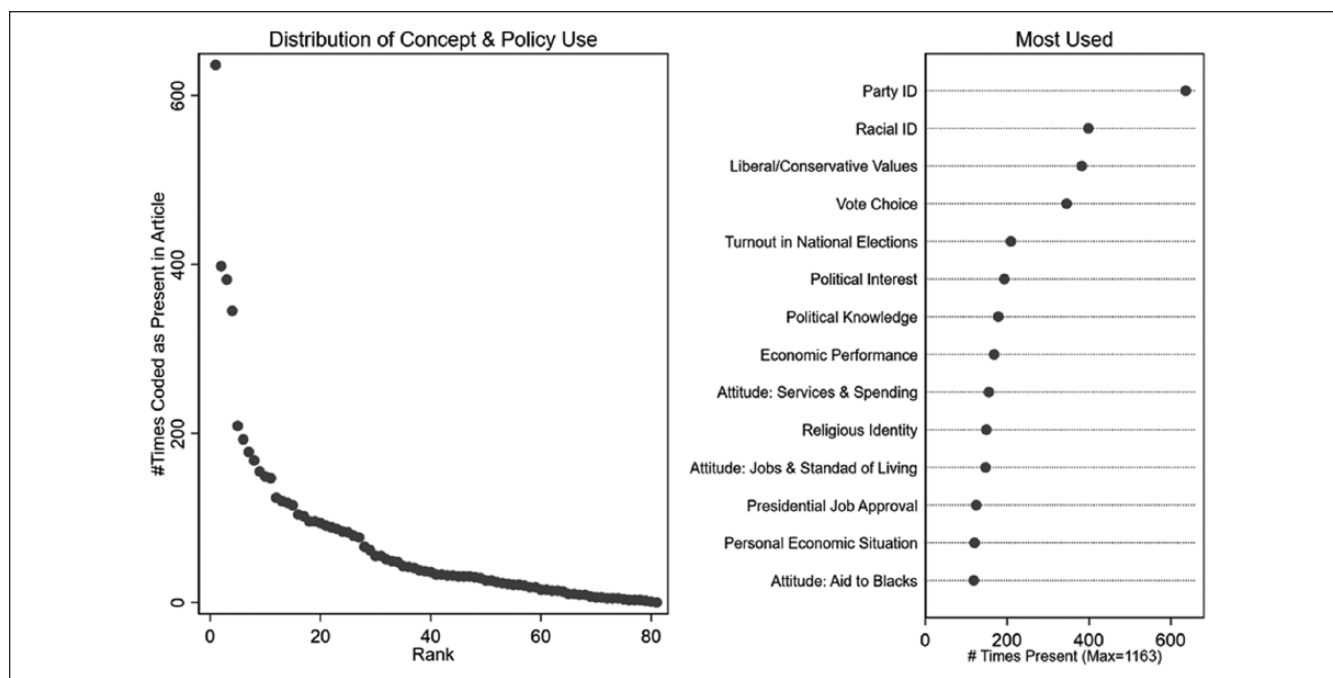


Figure 1. Concept and policy issue use.

Note. The left-hand graph plots the number of times each of concepts and issues was coded as present in an article. The right-hand graph focuses on the concepts that appeared in at least 10% of the articles and again plots the count of their appearance.

themes of the paper.” The average number of “central” factors per article was 2.84 ($SD = 2.68$). On average, 2.11 (1.68) concepts were considered central versus 0.73 (2.03) policy issues with scant a correlation between the two ($r = .04$).

There are two ways to use this information to inform our understanding of the most important elements of American mass behavior research, both of which are displayed in Figure 2. First, we can consider centrality *contingent on appearance* in an article. In other words, when a concept is coded as present how often is it also coded as central? The left-hand subgraph in Figure 2 provides the 15 most central concepts/issues by this reckoning. Although interesting, this method of determining centrality provides a misleading image of the factors most central to the behavior literature as the resulting tabulations tend to privilege little used concepts/issues that happen to receive specialized attention. For instance, ‘attitudes about divided government’ is ‘central’ in all three articles in which it was coded as appearing. The right-hand subgraph of Figure 2 instead focuses on the number of times a concept/policy was coded as central out of all potential cases—all 1,163 articles. The resulting list looks very similar to the ranking produced in Figure 1, with “Vote Choice” and “Party ID” emerging as the dominant factors, appearing as central in at least 20% of potential cases. Figure 2 also shows the beginnings of a sharp drop off in “centrality” after the fifth most used item (“Racial Identification”), with the remainder of items, and thus the vast majority of factors, coded as central in fewer than 10% of the possible cases. Figure 2 reiterates the skewed topical focus of the

American political behavior literature, one heavily centered on the vote decision (and, as mentioned, one cohering with the ANES’s focus).

Figures 1 and 2 indicate that there is a clear focus to the American political behavior literature in the aggregate, but this does not tell us about any potential dynamics or evolution in these patterns. Figure 3 enables such an investigation by plotting the rate of appearance for the 15 most central elements identified in Figure 2 over time (see Figures OA3-OA6 in the Online Appendix for the remainder of the concepts/policies). Because the number of articles coded per year varies, Figure 3 focuses on the proportion of articles coded in a given year wherein the concept in question was present. On one hand, Figure 3 shows a fair degree of stability for many of these items, including vote choice, PID, voter turnout, and attitudes regarding services and spending. On the other hand, there does appear to be a noticeable increase in the use of racial identity and political knowledge over time and a decreasing emphasis on attitudes on jobs and income support and aid to Blacks. On the whole, though, Figure 3 suggests a research agenda that, despite some fluctuations, appears to be fairly consistent over time.¹¹

As noted, Figures OA3-OA6 in the Appendix provide an overview of the remainder of the coded items over time. We pause to note three interesting patterns that emerge. First, there is a marked increase in the use of two values items—“Equalitarianism” and “Moral Traditionalism”—perhaps reflecting the increased salience of cultural issues in American politics and concomitant efforts at understanding

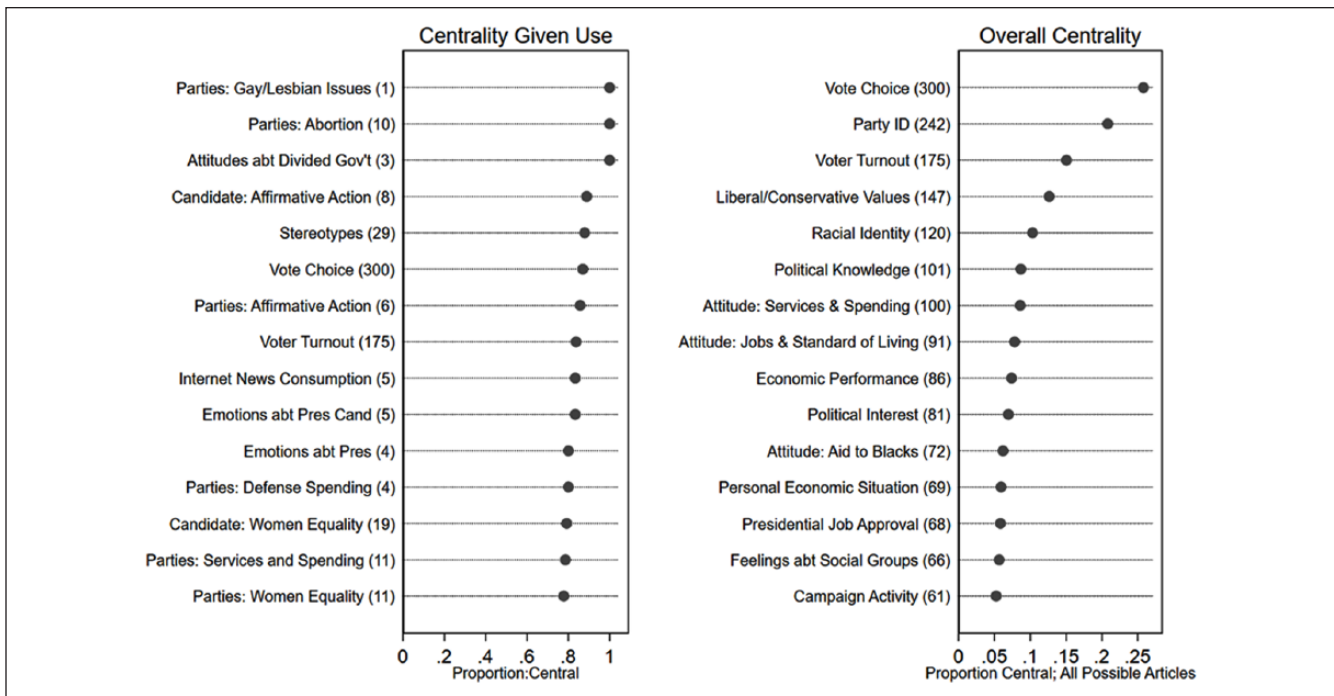


Figure 2. Concept and policy centrality.

Note. The left-hand graph provides the proportion of cases where a concept/policy was considered central in articles where it appeared. The right-hand graph provides the proportion of cases where the concept was considered central out of all potential articles. The numbers in parentheses provide the number of times the concept/policy was coded as central. "Attitude" refers to individual attitudes on an issue, "Parties" to party placements, and "Candidate" to candidate placements on the issue.

the nature and origins of political values among the mass public (e.g., Carmines, Einsley, & Wagner, 2012; Goren, Federico, & Kittilson, 2009; Jost, Federico, & Napier, 2009). Second, there is a slight increase in attention to "Campaign Contact" beginning in the early 1990s, signaling a renewed interest in the topic following Rosenstone and Hansen's (1993) landmark book and the resulting field experimental literature on the effectiveness of various mobilization strategies (e.g., Gerber & Green, 2000; Gerber, Green, & Larimer, 2008; Sinclair, 2012). Finally, there is a decrease in attention to many of the individual issue attitude measures albeit with one notable exception: A positive trend in attention to respondent attitudes on gay and lesbian issues. We take this last result as only suggestive—recall that we relied on the ANES for the issues we coded and our sense is the ANES is constrained in adding novel issues. Thus, the downward trend may be due to us missing (i.e., not coding for) new issues. Regardless, overall, Figure 3 and Figures OA3-OA6 suggest a political behavior agenda with a solid anchor (voting behavior, consistent with the mission of the ANES) and insurgent interest in values and cultural issues.

Political Behavior Methodology Over Time

In the foregoing, we focused on the *content* of political behavior research over time—the *what* of the behavior

literature. We now turn to discussing the methodological focus of this research—the *how* of this body of work. Recall that each article was coded as to whether it used data from the ANES, other surveys, experiment(s), or archival sources, with coders able to mark more than one source as needed. The dominant methodology within these article is survey methodology, with some type of survey coded as present in 913 (78.50%) of the articles. This far outstrips the number of articles using either experimental ($n = 113$, 9.72%) or archival ($n = 188$, 16.17%) data sources. Political behavior research, at least when it comes to American political behavior, is nearly synonymous with survey methodology during this time frame.

Survey methodology dominates American political behavior research and the ANES dominates within this category and, hence, within this literature during the period investigated. Although 50.90% of all articles were coded as using "Other Surveys," a sizable proportion of all articles featured the ANES (33.71%). Given this distribution, the ANES is likely the single most important data source for political behavior research on American mass politics.¹²

Has the dominance of the ANES changed over time? We address this with Figure 4, which provides a temporal perspective of the methodological choices made in American political behavior research. The top row of graphs provides the proportion of articles in a given year where a particular

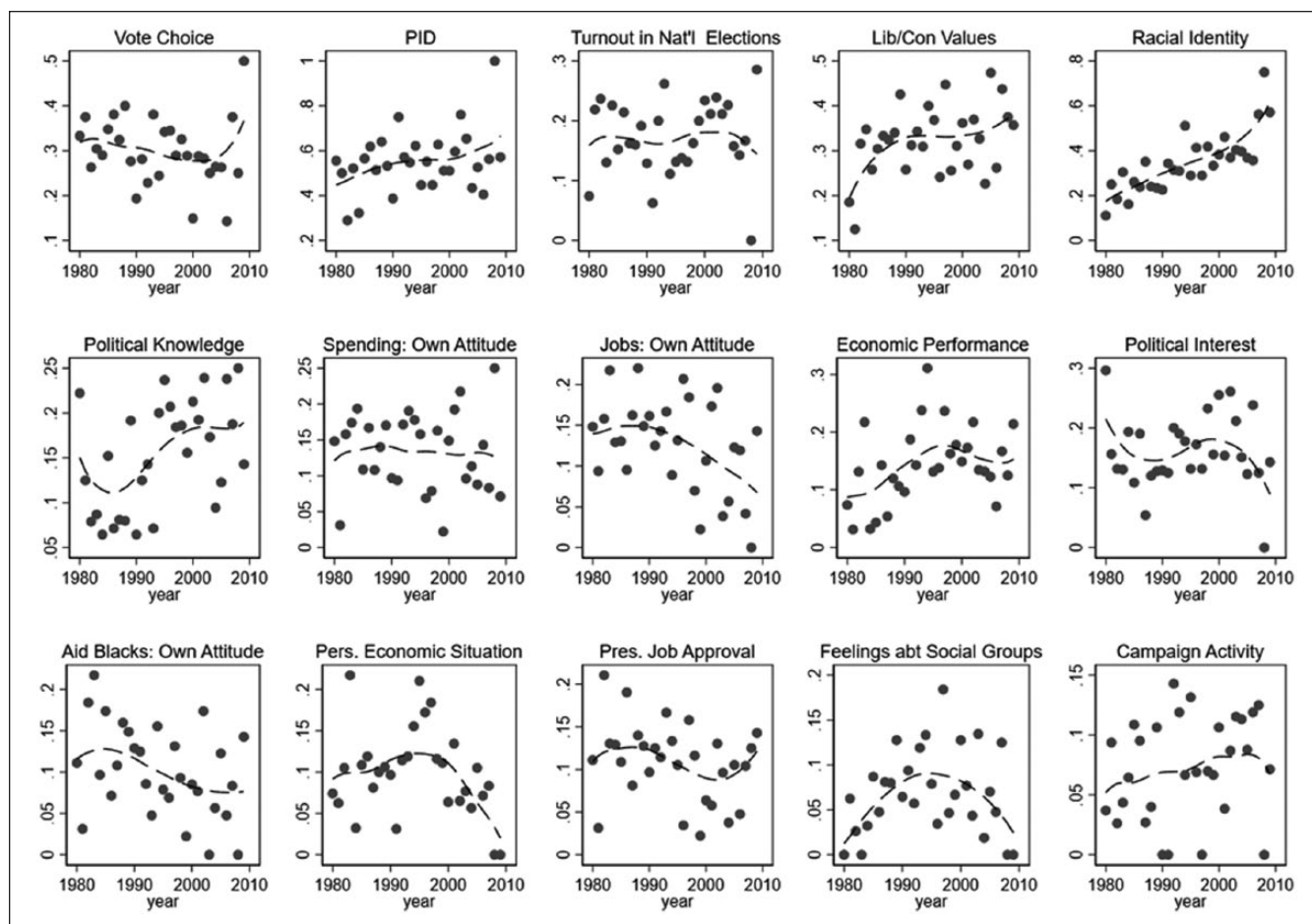


Figure 3. The evolution of the political behavior agenda, 1980 to 2007.

Note. Each marker provides the proportion of articles in a year in which the concept was coded as present. The fitted line is obtained from lowest smoothing using a bandwidth of 0.5 and mean smoothing. PID = party identification.

data source was coded as present. The bottom row of graphs provides data for the two survey options combined as well as an examination of the potential trends in mixed data use (i.e., the proportion of articles using both survey and experimental data or survey and archival data). A few notable points emerge from Figure 4. First, the dominance of survey data sources over experimental and archival sources discussed above can clearly be seen at play in Figure 4. Second, while there has been a recent uptick in use of experimental methods (Druckman et al., 2006, 2011), this growth is rather modest and experiments are still a clear minority in data use compared with surveys overall and to the ANES in particular. During the last 5 years of the 2000s (2005-2009), approximately 13% of coded articles featured experimental methods, that is, nearly triple the figure from the first 5 years of the time series (1980-1984; 4.6%). However, the former number is still well below the average proportion of articles using survey methods during this time frame (73.8%) and nearly one third of the figure for the ANES (33.7%). Finally, there is some evidence of an increased tendency to mix data

sources, but surprisingly between survey and archival data sources and less so with survey and experimental methods, despite the potential benefits to a study's internal and external validity of pairing these latter data sources. Ultimately, Figure 4 shows a slowly changing data landscape, one dominated by survey methods, and particularly the ANES, but with a slow-growing emphasis on experimental data sources.

Contributing to the predominance of the ANES is surely the ability of researchers to explore important questions over a long time frame, something which most alternative data sources cannot equal. This fact is captured in Figure 5, which plots the proportion of ANES coded articles, both overall and over time, using a single, two, three or more, and two or more ANES surveys. Nearly 70% (264 / 392) of the articles coded as containing ANES data use the time series component of the survey (i.e., at least two surveys were used). Notably, researchers appear to have made increasing use of the time series as the remainder of Figure 5 attests. For instance, during the time span of 1980 to 1984 approximately 29% of ANES-coded articles per year used three or more

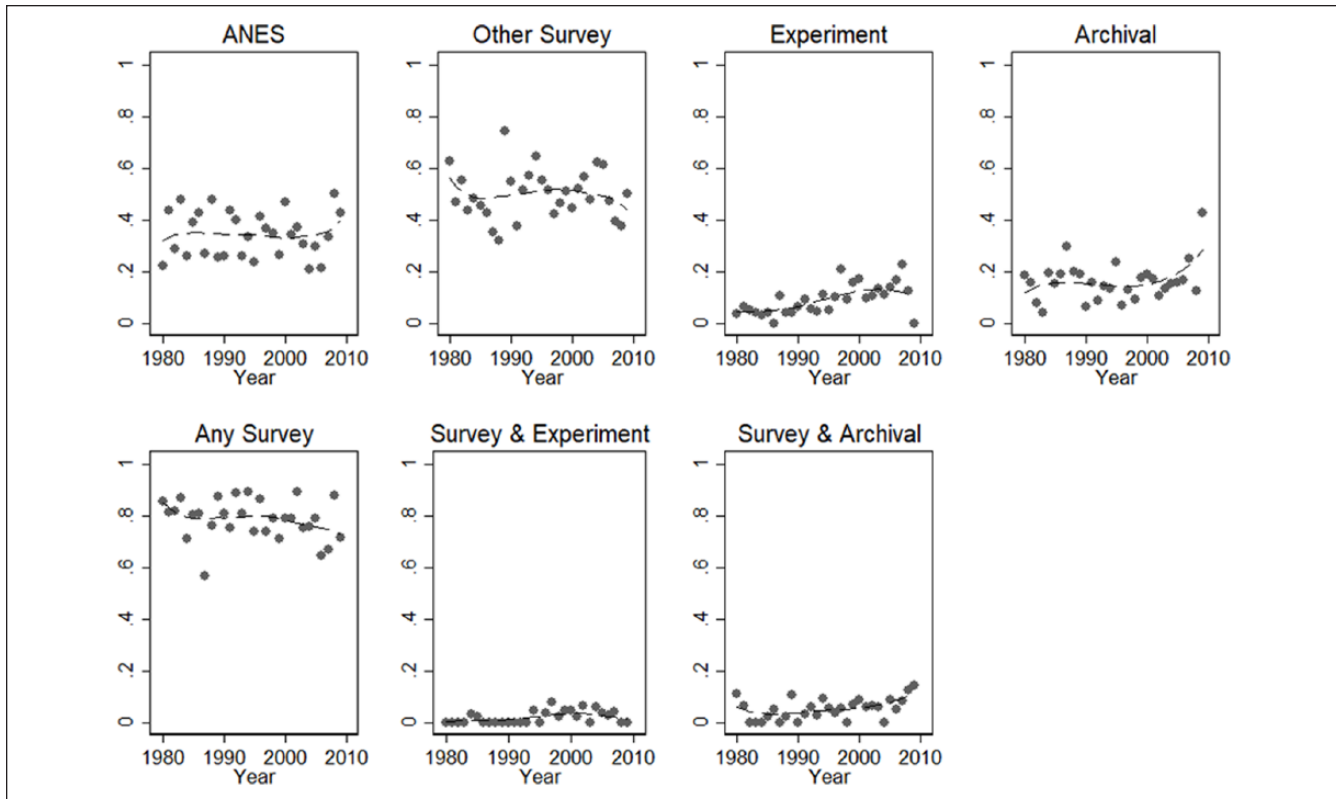


Figure 4. Measurement use over time.

Note. Each marker provides the proportion of articles within a given year wherein a particular method was coded as present. The fitted line is obtained from lowess smoothing using a bandwidth of 0.5 and mean smoothing. ANES = American National Election Studies.

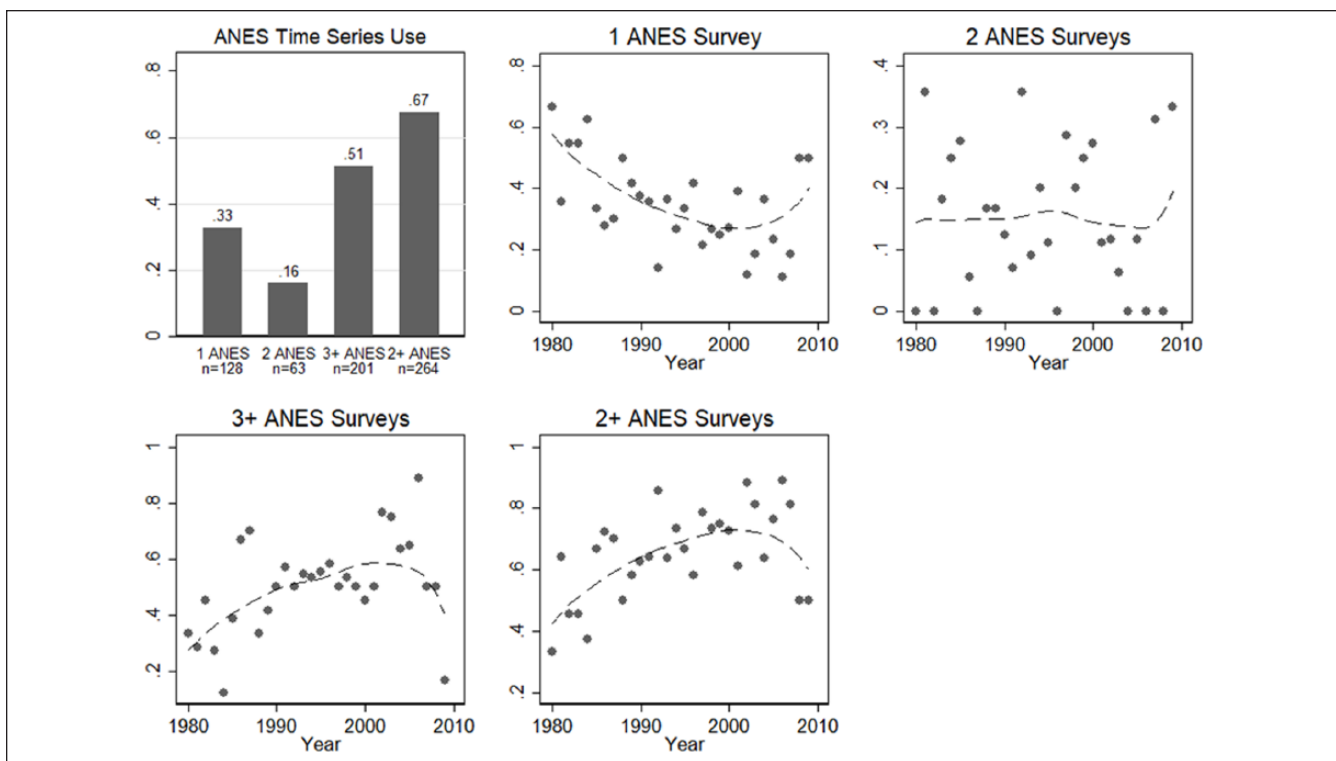


Figure 5. Use of the ANES time series.

Note. Graphs provide the proportion of ANES articles using one, two, three or more, and two or more ANES surveys both overall (top-left corner) and over time. The fitted line is obtained from lowess smoothing using a bandwidth of 0.5 and mean smoothing. ANES = American National Election Studies.

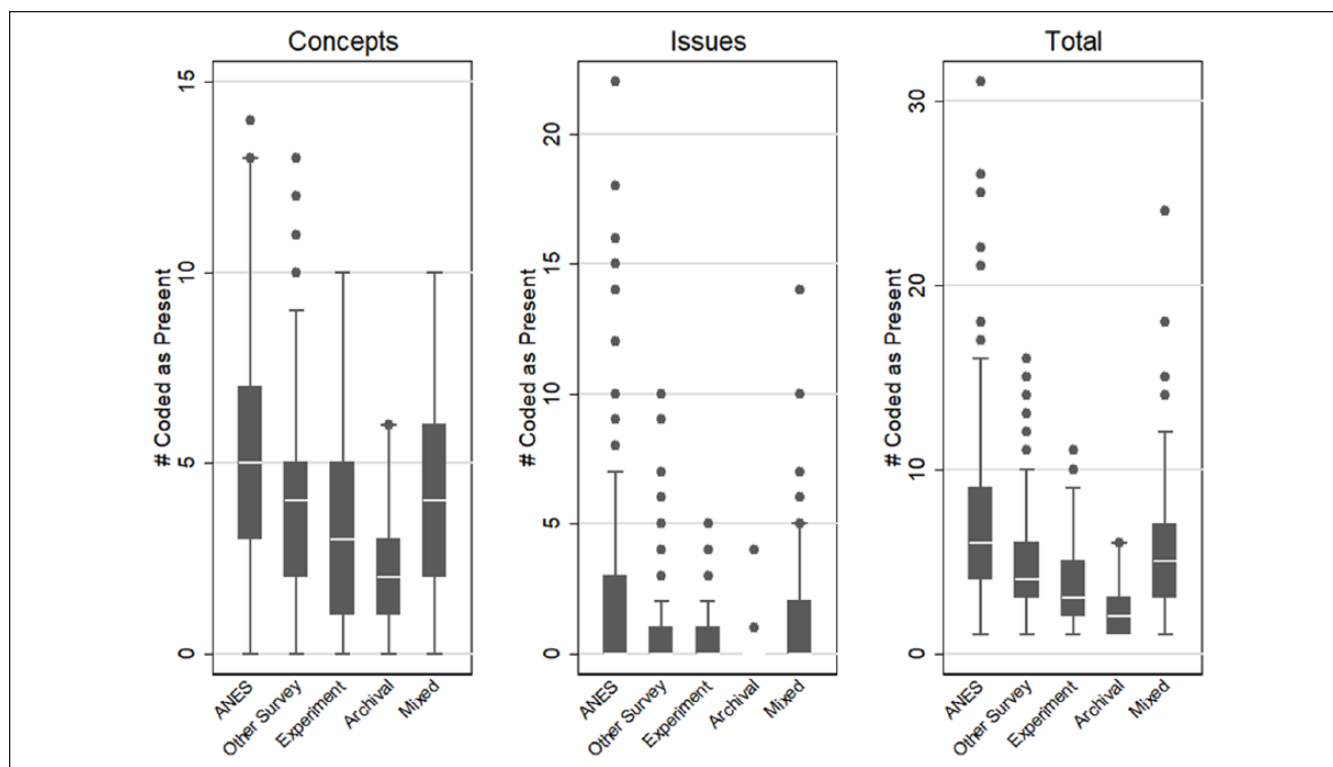


Figure 6. Article complexity by methodology.

Note. Each graph is a box plot capturing the number of concepts, issues, or both present in an article by data source. ANES = American National Election Studies.

ANES surveys. This number doubled by the end of the coded time frame to approximately 68% per year during the time frame of 2003 to 2007.¹³ Clearly, researchers are making use of the overtime continuity available in the ANES. Although the emergence of online data survey collection resources, such as YouGov, GfK, and Mechanical Turk, may enable researchers some greater flexibility in designing studies to capture important elements of political behavior during single time periods, the ANES seems poised to remain the key resource for American political behavior researchers interested in overtime analyses.

Finally, we can square the circle here and return to our discussion of the contents of political behavior research and, specifically, how concept use varies across these different data sources. In Figure 6, we provide a series of box plots showing the relative use of concepts, issues, and both by data source of the article. Note that all cases of mixed data use are indexed under “Mixed” for this purpose, that is, “ANES” indicates that the ANES was the *only* data source recorded for the survey, and so on. What is perhaps most notable about Figure 6 is the enhanced “complexity” of articles using solely survey data sources and particularly those focused exclusively on the ANES compared with those employing experimental methods.¹⁴ This likely reflects two factors: (a) the political depth of the ANES enables researchers to incorporate more elements than when using alternative survey

sources that may not be as uniquely focused on politics, and (b) observational data sources require more complex efforts at addressing issues of internal validity, issues that are often resolved by randomization procedures within experimental articles. Even so, the result suggests experiments may not touch on nearly as many topics as those studied in observational data.

Data: 2010-2018

Our coding included articles from 1980 to 2009. While that provides a lengthy evolutionary time period, it also ends at a point when the discipline underwent some of the notable changes previously mentioned. This includes the continued rise of experimental methods, as further exemplified by the founding of the American Political Science Association’s section on experimental methods in 2010 and the publishing of the *Cambridge Handbook of Experimental Political Science* in 2011 (Druckman et al., 2011). Concomitant with these changes, as discussed, came the emergence of low-cost survey data sources such as Amazon’s Mechanical Turk (e.g., Berinsky et al., 2012; Mullinix et al., 2015) and Internet survey panels (e.g., Callegaro et al., 2014). Furthermore, the discipline, more broadly, transformed due to a push for open science practices (e.g., Nosek et al., 2015) as well as the emergence of using social media to study political behavior

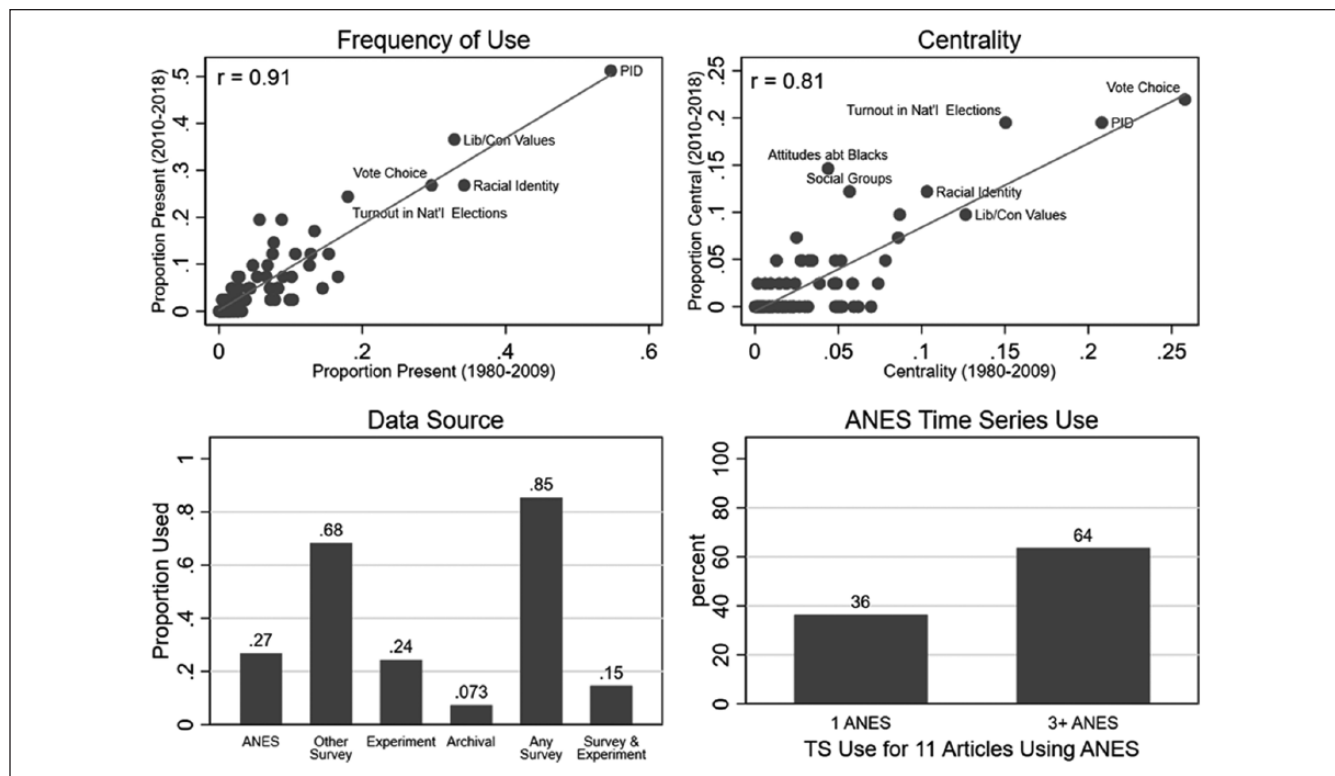


Figure 7. Concept and data use in the 2010-2018 sample.

Note. The top two graphs provide the proportion of times an article was coded as present (or central) in 2010-2018 versus 1980-2009. The bottom left-hand graph provides an overview of the data sources used in the new data, whereas the bottom right-hand graph focuses on the use of the ANES time series among those articles using ANES data. ANES = American National Election Studies.

(e.g., Murphy et al., 2014). Did these changes post 2009 change the patterns we reported above?

To answer this question, we drew a sample of articles from 2010 to March 2018. We did this by identifying all political behavior articles in the same set of journals as analyzed above (based on the readings of abstracts). We then drew a random sample of 41 articles from this set, stratified such that it included at least five articles from each year (from 2010 to 2017 and three from 2018), and at least two articles from each journal (over the entire time period).¹⁵ We then had a team of four coders, after training and practice, code each article using the same scheme as above. This coding took place in the winter/spring of 2018.

Figure 7 provides an overview of the 2010-2018 sample of articles. We begin our discussion with the top two sub-graphs, which plot the proportion of times each concept was coded as either present or central in the 2010-2018 sample versus the 1980-2009 sample. The key takeaway from these sub-graphs is the *stability* of concept use between the two data sets. Indeed, the top five most used concepts in the 1980-2009 period were also the top five most used concepts in 2010 to 2018. This does not mean that there was no change at all, of course. Political interest saw a marked decline in these articles whereas attitudes about Blacks and feelings about social groups saw a marked increase in their centrality.

However, Figure 7 ultimately shows a general stability in the agenda of the political behavior literature.

The bottom half of Figure 7 focuses on the type of data used in the new articles. We again see important similarities alongside a key deviation. On one hand, survey sources continue to dominate the behavior landscape with approximately 85% of articles in the 2010-2018 period coded as using a survey of some sort. The ANES largely maintains its prime position as well. On the other hand, the growing use of experimental data we documented in Figure 4 has continued apace with 24% of articles using an experiment and 15% of them using an experiment in combination with a survey.¹⁶ However, while experimental research now occupies a much more sizable fraction of the behavior universe, survey use still predominates.

These results beg a question of why the shift toward experiments became most evident after 2009. As explained, there certainly were some notable institutional developments concerning experiments post-2009; however, on the contrary, experiments were ostensibly “mainstream” by the 1990s and early 2000s (e.g., Gerber & Green, 2000; Kinder & Palfrey, 1993). We suspect the “slowness” reflects a path dependency in the published literature: The publication process likely favors extant approaches that are familiar to editors and reviewers. If one were to explore the “gray literature”

that consists of unpublished works (e.g., Fanelli, Costas, & Ioannidis, 2017), the picture—time wise—may be quite distinct. Given that path dependency, then, the shift we document is notable. At the same time, the ANES's stability is also impressive: even in the midst of major disciplinary changes, the ANES still accounted for nearly one quarter of all political behavior work. The ANES continually balances over-time (time series) continuity and innovative science, and there is no indication that it has failed to be successful to do this so far. On a related note, the continued dominance of the central concepts shows that the methodological changes in the discipline had little effect on the substantive focus.

Concluding Discussion

In this article, we have discussed the results of a novel content analysis of over 1,100 published articles concerning American mass political behavior. These analyses suggest at least four key takeaways. First, the agenda of this literature during the time frame investigated is heavily skewed toward voting, which may not be all that surprising given that two of the landmark books in this broader literature are titled *Voting* (Berelson, Lazarsfeld, & McPhee, 1954) and *The American Voter* (Campbell, Converse, Miller, & Stokes, 1960). Second, experiments were ascendant, but have not displaced survey data sources, and particularly the ANES, as the central workhorse of American political behavior research. Third, while important changes to this agenda have occurred over time, the agenda of American political behavior research remains largely the same as it was in 1980 and that agenda coheres with the mission of the ANES. Substantively, the underlying goals of the ANES echo the foci in the field. Finally, researchers clearly utilize the unique time-series component of the ANES, which contributes to the centrality of the ANES within the literature. Overall, our results not only accentuate the central place of the ANES within the political behavior landscape, but also make clear this place has been stable over time. This is, to us, very clear evidence to justify the continuing investment in the ANES as a data source for understanding American political behavior and, hence politics.

Survey methods, and the ANES in particular, constitute the lion's share of data for political behavior researchers during the time frame explored here. And, while experimental methods constitute a growing share of the behavior literature, this growth appears to be relatively slow thereby suggesting a continued role for the ANES and other surveys in guiding research on American political behavior. To be clear, while we used the ANES for guidance in constructing our coding scheme, it was not the only source of the scheme and by no means did it interest with our selection of articles to code. In other words, our results were not bound to find a central place for the ANES either in its presence in behavior research or in its underlying prominence in concept determination. Even with the rise of alternative methods and data collection opportunities since the mid- to late 1990s, the

ANES still dominates. It is a sound investment: It is the most used source of data, focuses on the concepts central to the field, and provides unparalleled access to over-time dynamics.

Moreover, we believe our analyses suggest that the ANES will continue to play a central role in guiding research on American political behavior even with the growing movement to use what Groves (2011) refers to as "organic data"—behavioral measures such as Google search patterns, Twitter feeds, and other digital residues of politically relevant activities. As Groves (2011) notes, "data streams have no meaning until they are used" and, instead, "the user finds meaning by bringing questions to the data and finding answers in the data" (p. 868). The stability of concepts in this literature suggests that the ANES will continue to be the guiding intellectual standard in the questions that are asked. In addition, we believe the ANES will remain central to political behavior research because it has no real competitor in terms of the availability of over-time repeated *political* data and particularly for such a long time frame. Researchers interested in tracking *changes* in political behavior due to changes in political and social context will necessarily remain focused on the ANES regardless of the presence of these new data sources, at least for the foreseeable future.

Although our content analysis was quite fine-grained in its focus and incorporated a large number of articles, it still possesses some important limitations that future work could address. One limitation concerns the time frame explored. Although we have a sampling of articles from 2010 to 2018, this sample is obviously much smaller than what we possess in the 1980-2009 time frame, which necessarily prevents us from making overly confident assertions about whether the trends we observed here also characterize the development of the behavior literature post 2009. We observed a growing focus on experimental data sources in our data, albeit one that did not shake the continued dominance of survey data in the behavior literature. It is likely that the gap in use of survey and experimental methods will only continue to further narrow in the ensuing near decade due to an increased focus on field experimental work (e.g., Broockman & Butler, 2017; Gerber, Huber, & Washington, 2010; Panagopoulos, 2010) and the adoption of crowd-sourcing data platforms such as Mechanical Turk as a cost-effective method for fielding survey experiments (e.g., Arceneaux, 2012; Dowling & Wichowsky, 2015; Robison, 2017). However, this narrowing is likely still one wherein survey use remains more popular in the field given the very high base rate for the use of survey methods.

A second potential limitation concerns our coding list for concepts and the journals from which we sampled. In constructing our coding scheme, we attempted to construct as broad a list of concepts and issues as possible. However, no coding list is ever complete or perfect. In addition, we strove to capture the behavior literature as revealed from a wide array of journal sources, but in doing so, we

necessarily had to omit attention to important sources of behavior research, such as *Political Communication*. Thus, it is possible that an expansion of our coding list to include omitted concepts, such as political tolerance or framing, or our sampling frame to include additional journals, would influence the conclusions that we reach. That said, the clear dominance of voting-related concepts in Figures 1 and 2 suggest that such alterations would largely affect our results around the margins rather than changing the core story.

A third limitation is our focus on *published* research. This focus by necessity ignores research contained in the “gray” literature, studies from PhD theses, conference papers, and books (Fanelli et al., 2017). This may be problematic insofar as there exist biases in the publication process that favor certain concepts or methodologies rather than others. Indeed, one potential explanation for the skew and stability in concept use we observe in our two samples may be a path dependency in this publication process wherein topics/methods that earned attention in earlier periods receive a credibility boost because of their early success that facilitates continued attention.

Finally, our analyses are clearly limited by their geographic focus. As articles focusing on political behavior outside of the United States were excluded from analysis, we are unable to speak to any potential differences in content or methodological focus based upon geographical focus. One obvious likely difference is in the use of the ANES, although it is possible that a similar exercise would reveal the World Values Survey or some analogous survey as serving a similar role. Ultimately, we view this study as one that could be readily applied to non-U.S. data and, thanks to recent advances in crowd-sourced text analyses (Benoit, Conway, Lauderdale, Laver, & Mikhaylov, 2016), one that is quite ready to be made. Overall, though, our results reveal a stable methodological and conceptual field that relies on surveys and focuses on voting. We leave it to others to assess the substantive advances made within the confines of the topics and methods, and the desirability of such stability. But we do conclude that, by all accounts, the investment in the ANES has handsomely paid off as it not only provides the central data source, over time, but also is foundational in terms of concepts studied by political behavior researchers.

Authors' Note

Data (with a codebook) used in this article are available here: <http://faculty.wcas.northwestern.edu/~jnd260/publications.html#methodology>

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Notes

1. We thus do not investigate the gray literature, such as conference papers (Fanelli, Costas, & Ioannidis, 2017).
2. The journals include the *American Political Science Review*, the *American Journal of Political Science*, the *British Journal of Political Science*, *The Journal of Politics*, *Perspectives on Politics*, *Political Behavior*, *Political Psychology*, *Political Research Quarterly*, *Political Science Quarterly*, *Public Opinion Quarterly*, and *The Western Political Quarterly*.
3. As such, pure theory papers (formal or not), opinion papers, qualitative empirical papers, papers about other countries than the United States, and papers only about political elites rather than ordinary Americans are excluded. We arrived at our total number in two stages. First, a team of coders read the abstracts for all the downloaded articles, selecting the relevant ones (with this, our sample was 1,832). Second, our main content analyzers assessed whether the article met our criteria and, if not, they did not code it.
4. The years 2008 and 2009 are outliers in terms of coded articles; while between 27 and 51 articles were coded per year between 1980 and 2007, only eight articles were coded in 2008 and 14 in 2009. See Figure OA1 in the Online Appendix for a detailed look at the distribution of articles per year.
5. Coders were provided with a detailed instruction document and engaged in substantial practice coding before encountering the articles in the data sample.
6. Concepts do not include codes for basic demographics such as gender, age, and income.
7. To assess reliability, we had a team of 21 coders code the same five articles, identifying whether or not a concept was present. Thus, there were $48 \times 5 \times 21$ total decisions to be made (i.e., 5,040). We found 91% agreement.
8. Articles, on average, were coded as containing approximately 8% of the available concepts and approximately 3% of the available policy issue codes.
9. Tables OA1 and OA2 in the Online Appendix provide a tabulation of code frequency, centrality, and method use for each of the 81 concepts/issues.
10. This is at least partially due to the cut off used. “Campaign Activity,” for instance, was the 21st most frequent topic of the behavior literature, appearing in 91 articles. However, this pales in comparison with the 345 appearances of “Vote Choice” and the 209 appearances of “Turnout.”
11. Interestingly, ethnic identity also sees a marked increase in use during this time.
12. Although it must be noted that when “Other Survey” was coded the source of the survey was not coded, for example, whether it was from Gallup, Pew, or a single shot survey administered by the researcher.

13. Figure 4 shows a drop off in use of more than one ANES survey in 2008 and 2009. However, this is largely due to the drop off in overall articles coded and ensuing noise in the estimates. For instance, eight articles were coded in 2008 and 14 in 2009. In the former case, four articles used ANES data and two used three or more surveys, whereas in the latter six articles used ANES data and one used three or more surveys. Had the number of articles coded in these years resembled the years immediately prior to them (i.e., 2003-2007) then it is highly likely that we would see no such drop off.
14. There is not surprisingly an overlap in concept use when looking at those concepts/issues that are commonly found on surveys (ANES or otherwise) and in experiments. For instance, the concepts/issues most commonly tagged as having experimental data are (in this order) PID, liberal/conservative values/vote choice, racial identification, political knowledge, interest in campaigns, turnout, and spending/services attitudes (own). There is a pretty fair drop off here as well when one moves from political knowledge (present 30 times) to interest (20) and then down to 14, 12, and so on. So, while experimental data here are focused on a smaller number of concepts, they tend to be the same ones as used in other contexts.
15. We identified a total of 1,246 political behavior articles. From that, we drew an initial sample and then randomly dropped articles from years/journals that met the aforementioned quotas and resampled until the entire article sample met the described criteria. As with the main coding, we had the coders confirm whether a selected article was a quantitative study of American mass political behavior and two of our original sample turned out to not fit upon a closer read (i.e., we had originally sampled 43).
16. In line with evidence of an experimental turn from the journals we coded, it also is worth pointing out that the *Journal of Experimental Political Science* began publishing in 2014, with every article presumably being an experiment of some type. Of those, we counted that nearly 55% are in the field of American mass political behavior—clearly, then, since 2010, experiments have played a more and more central role in the political behavior field.

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